

Flight Scientist Report
Thursday 02/03/2022 ACTIVATE RF117

Flight Type: Statistical Survey Flight
Flight Route: KLFI-ECG-OXANA-3245N07141W-OXANA-ECG-KLFI
Special Notes: AMS down this flight. 1st of 2 flights this day.

King Air

Pilot report (Coldsnow):

Flight flown as briefed (LFI ECG OXANA 3245N 07141W OXANA ECG LFI). Timing was within 10 minutes during the entire flight path. Four dropsondes released. All were nominal. Winds were W/SW ranging from 20-50 knots. Descent started approximately 30 NM from ECG on the RTB due to clouds and icing. No anomalies noted with the aircraft or the instrumentation.

Flight scientist report (Shingler):

KLFI KECG OXANA 3245N07141W OXANA KECG KLFI

Some mid level clouds on ascent around 18kft in route to KECG. Near OBX there was a thin layer of clouds between 5-6kft with a layer of scattering from the surface to 3kft. Around OXANA the clouds were more dynamic with individual tops between 3-5kft. Remainder of the outbound and inbound legs were fairly messy with sporadic small clouds with tops between 2.5-6kft. Nearing OBX seeing the mid level cloud layer at 16kft.

524 in nadir at 142825, 152830

4 Sondes dropped

OXANA

TURN

1/2 TURN/OXANA

OBX

Falcon

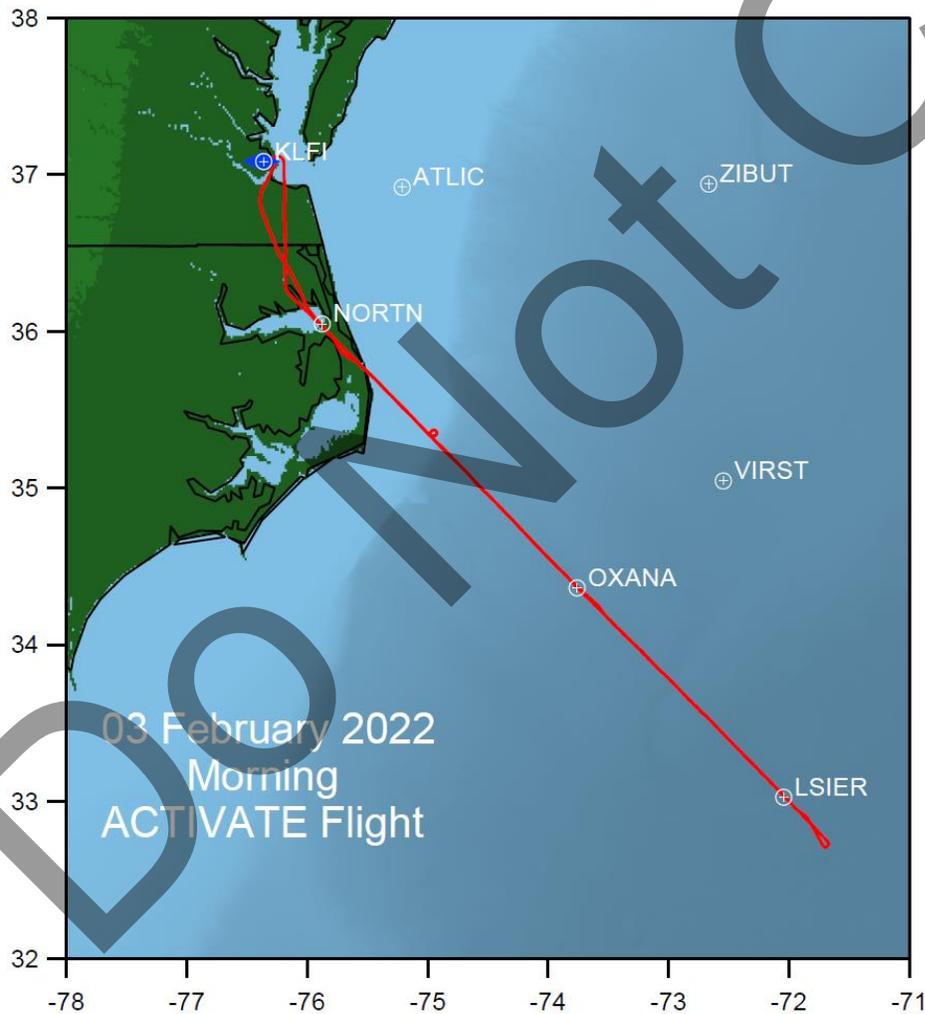
Pilot report (Baxley):

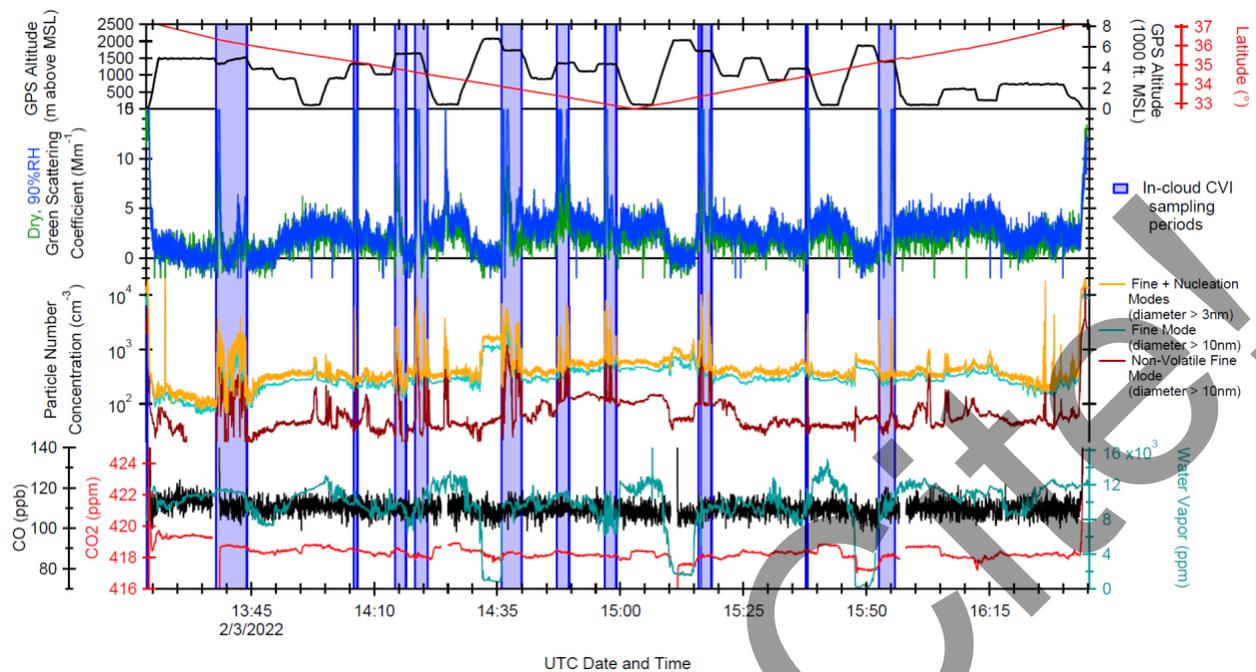
HU-25 ACTIVATE mission flown with B200. Baxley/Elder, Crosbie/Winstead KLFI-ECG-OXANA-3245N07141W-OXANA-ECG-KLFI (no changes in flight). Flight flown as briefed, no unexpected

events, delays, or anomalies. Areas of clouds and areas of clear as expected. Aircraft always within 10 minutes of B200.

Flight scientist report (Crosbie):

Stat survey OXANA-SE. Sparse cloud conditions in some areas with patches of clear. Over land, there was a surface inversion capping surface aerosol and trace gas enhancements. There was some pre-frontal clouds in the free troposphere. Over water, the PBL had more of a trade Cu character with less vigorous surface driven mixing and clouds that had less defined characteristics. The sub-cloud environment was quite warm and humid (for the season). Like the previous day, the deeper clouds were capped with an outflow region that was very thin. The deeper more structured clouds were interspersed with regions of clear with very small Cu, there was evidence of linear structures/features in the denser cloud regions along a N-S axis.





Do Not

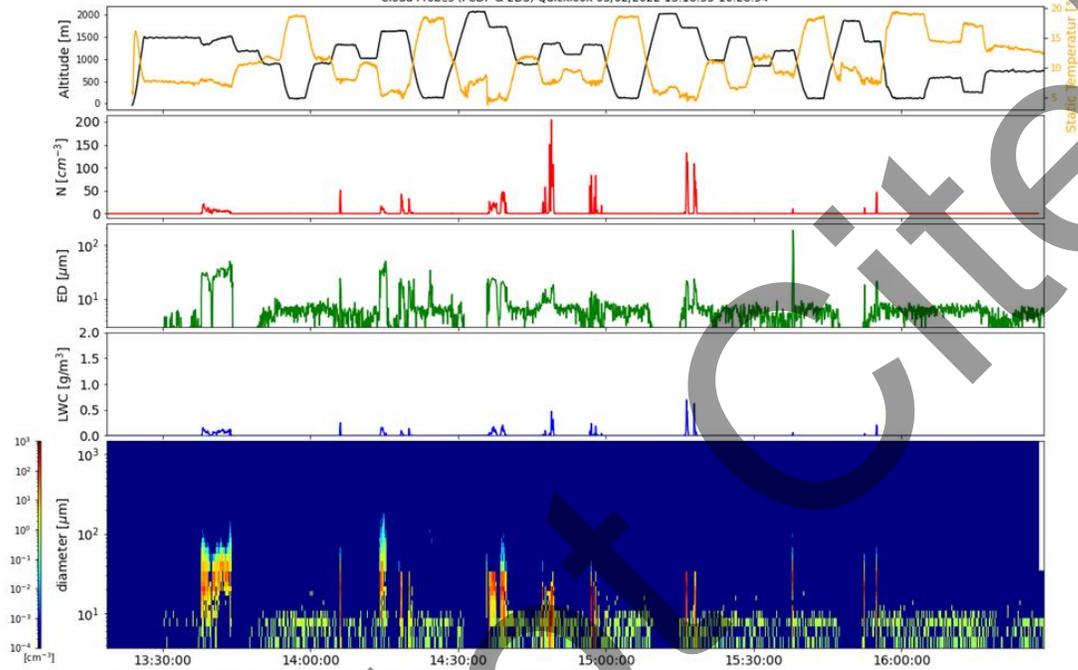
Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



Cloud Probes (FCDP & 2DS) Quicklook 03/02/2022 13:18:33-16:28:54



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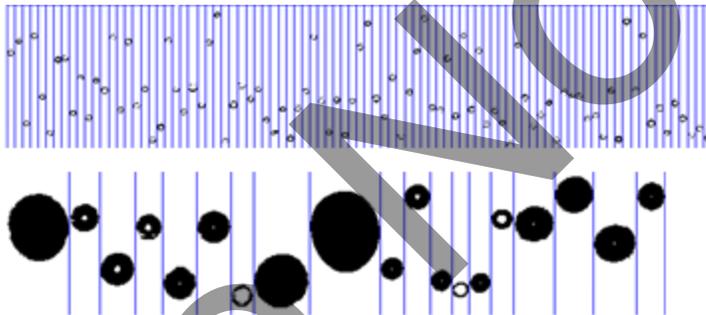
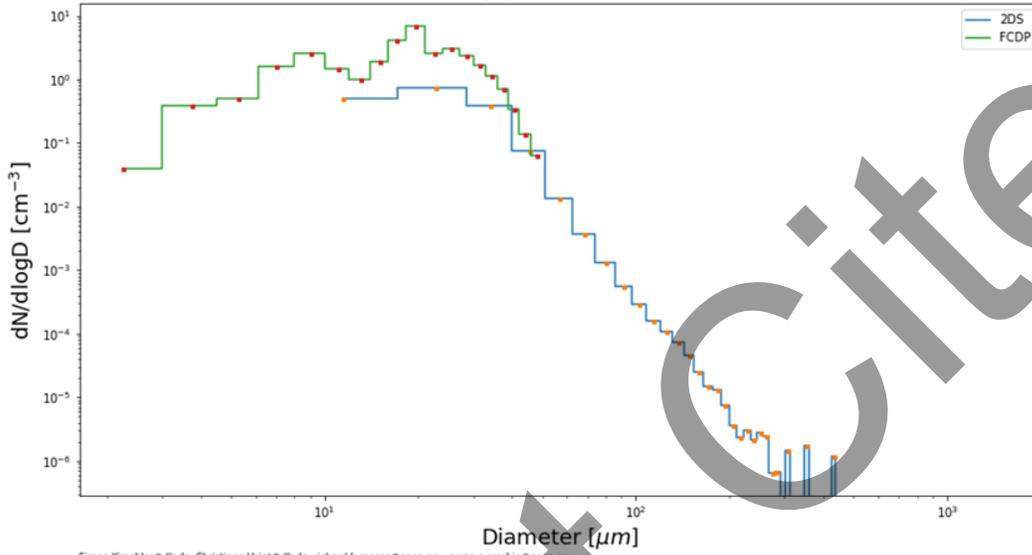
Do Not Cite!

PSD ACTIVATE

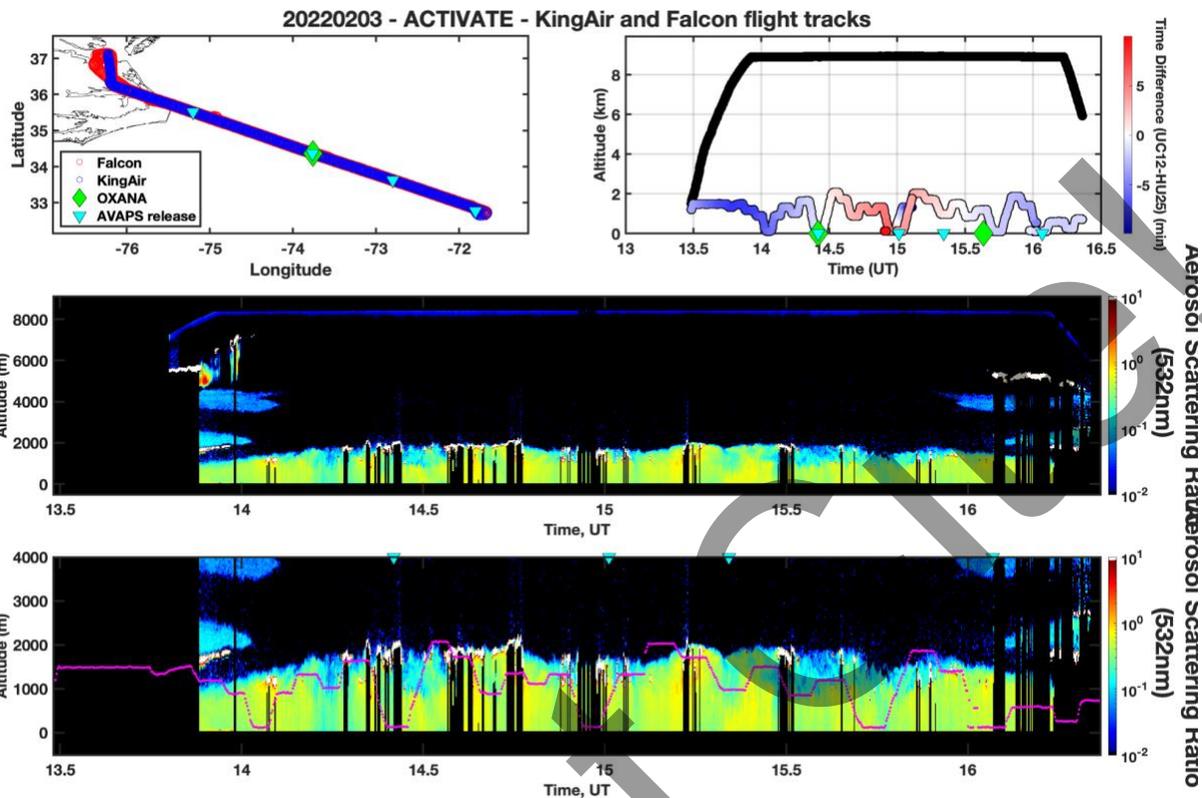
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PSD 03/02/2022 13:18:33-16:28:54

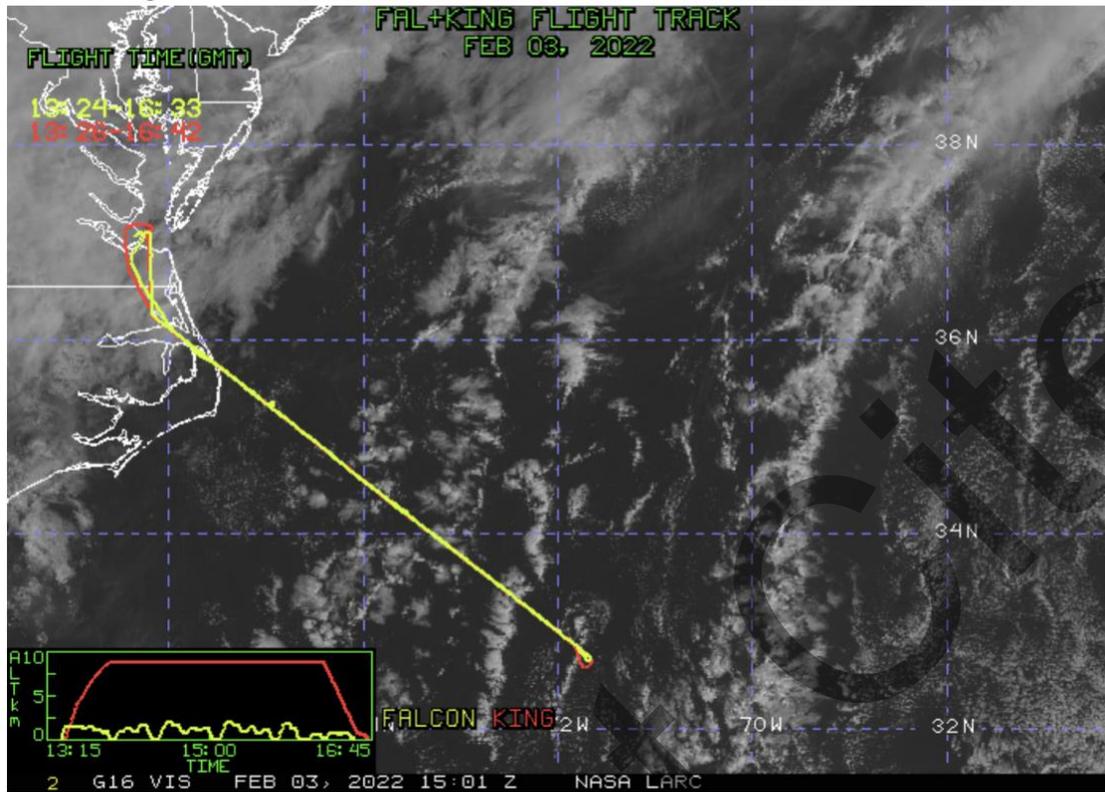


Only pure liquid clouds with Precip.

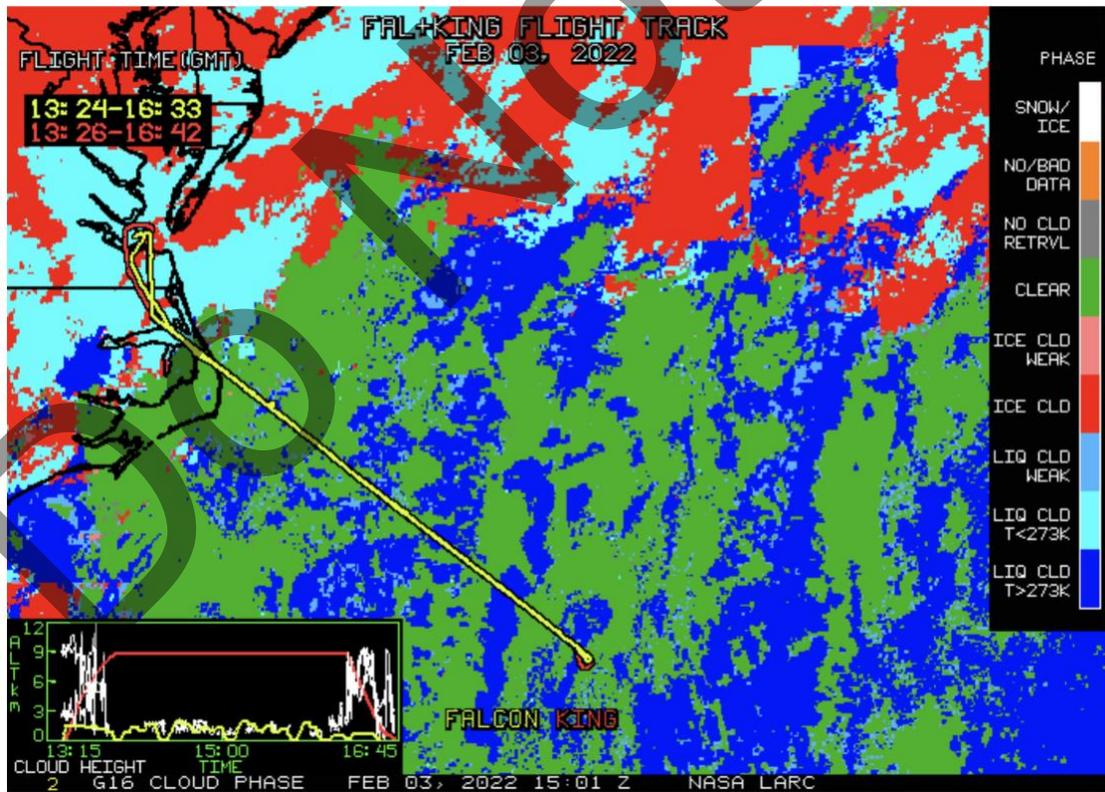


NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 117, 15:01 UTC Feb 03, 2022

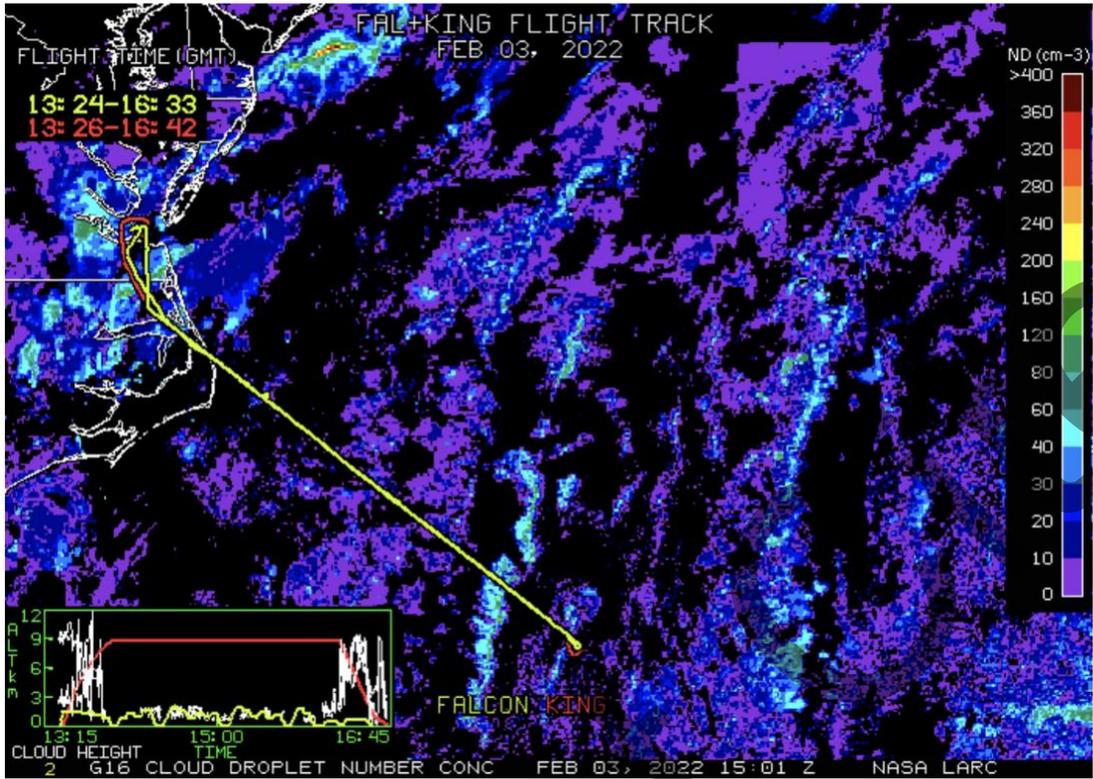
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

